



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,785	02/18/2004	Kun-Hak Lee	P56961	9835

7590 07/18/2007
Robert E. Bushnell
Suite 300
1522 K Street, N.W.
Washington, DC 20005

EXAMINER

PASIA, REDENTOR M

ART UNIT	PAPER NUMBER
----------	--------------

2616

MAIL DATE	DELIVERY MODE
-----------	---------------

07/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/779,785	Applicant(s) LEE, KUN-HAK	
	Examiner Redentor M. Pasia	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>02/18/2004</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 6-8, 11-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Kerkhof (US 2006/0209864 A1; hereinafter Kerkhof).

As to claims 1, 6, and 11 Kerkhof shows a system for extending a distance of x Digital Subscriber Line using a reserved telephone line (abstract; Figure 2), comprising: a Customer-Provided Equipment (CPE 11) for supplying an x Digital Subscriber Line transmission service to a subscriber terminal; a Digital Subscriber Line Access Multiplexer (DSLAM 20) setting an initial link with the Customer-Provided Equipment for an x Digital Subscriber Line transmission service, and transceiving data with the Customer-Provided Equipment through the set link (abstract); and a distance extension module (Repeater Container 23) being installed with at least more than one module

between the Digital Subscriber Line Access Multiplexer and the Customer-Provided Equipment (Par. 0024), in order to receive x Digital Subscriber Line transmission data from the Digital Subscriber Line Access Multiplexer in connection with an optional reserved telephone line selected from telephone line bundles incoming from the Digital Subscriber Line Access Multiplexer (Figure 2; Par. 0020), and after separating the received transmission data, to transmit the separated transmission data to a module of a back end or the Customer-Provided Equipment, or to transmit transmission data received from the module of the back end or the Customer-Provided Equipment (Figure 2; abstract). Kirkhof shows the method in claim 6 as shown in the rejection above.

As to claims 2, 7, and 12 Kerkhof shows a Customer-Provided Equipment module (Repeater 16) receiving x Digital Subscriber Line transmission data from the Digital Subscriber Line Access Multiplexer (DSLAM 20) by being connected to each of reserved telephone lines among telephone line bundles incoming from the Digital Subscriber Line Access Multiplexer (line 18) or a distance extension module of a front end (Par. 0024; series connection of several lines and repeaters of different container repeaters in between), and transmitting optional x Digital Subscriber Line transmission data to the Digital Subscriber Line Access Multiplexer (figure 2; Par. 0002); a Central Office module (Repeater 16) transmitting the transmission data separated through the Customer-Provided Equipment module to a distance extension module of a back end (Repeater 16; Par. 0024, repeaters in a series connection) or the Customer-Provided Equipment (CPE 11) in order to extend the x Digital Subscriber Line distance, or

Art Unit: 2616

transmitting transmission data received from the distance extension module of the back end or the Customer-Provided Equipment to the Customer-Provided Equipment (Figure 2; Par. 0024, repeaters in a series connection); and a controller (OMU 21, 24) setting an initial link between the Customer-Provided Equipment module and the Digital Subscriber Line Access Multiplexer or the Central Office module of the distance extension module of the front end, setting an initial link between the Central Office module and the Customer-Provided Equipment module of the distance extension module of the back end or the Customer-Provided Equipment, transmitting set link information to the Digital Subscriber Line Access Multiplexer, and relaying the transmission data between the Customer-Provided Equipment module and the Central Office module. Kirkhof shows the method in claim 7 as shown in the rejection above.

As to claims 3, 8, and 13 Kerkhof shows a controller (OMU 24) for setting the initial link with the neighboring distance extension modules, receiving the link information set between the distance extension module and the Customer-Provided Equipment, and setting a link to the Customer-Provided Equipment. Kirkhof shows the method in claim 8 as shown in the rejection above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2616

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-5, 9-10, 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerkhof (US 2006/0209864 A1; hereinafter Kerkhof) in view of Witty et al. (US 6782097 B2; hereinafter Witty).

As to claims 4, 9, and 14 Kerkhof shows the distance extension module uses reserved telephone lines (Figure 2). However, Kerkhof does not show that the reserved phone lines are installed in a home distributor or a terminal box.

Witty shows a Main Distribution Frame 12, which connects DSL lines to internal lines. It would have been obvious to one of ordinary skill in the art to modify the system of Kerkhof by having the Main Distribution Frame of Witty in order to have connectivity from a customer equipment to the network.

As to claims 5, 10 and 15, the same rejection is used as in claim 4.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Demakakos et al. (US 7092362 B1) – note abstract;

Czerwiec et al. (US 7023875 B2) – note abstract;

McGhee et al. (US 6658049 B1) – note abstract.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Redentor M. Pasia whose telephone number is 571-272-9745. The examiner can normally be reached on M-F 7:30am to 5:00pm EST, alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H. To can be reached on (571)272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Redentor Pasia



DORIS H. TO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600